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**CARMEN A. TRUTANICH**  
City Attorney

**REPORT NO. R 1 1 - 0 1 8 3**

**REPORT RE:**

**MAY 19 2011**

**DRAFT ORDINANCE AMENDING THE LOS ANGELES MUNICIPAL CODE  
PROVISIONS RELATING TO THE PLUMBING CODE**

The Honorable City Council  
of the City of Los Angeles  
Room 395, City Hall  
200 North Spring Street  
Los Angeles, California 90012

Council File 10-2335

Honorable Members:

We are transmitting to you for your consideration, approved as to form and legality, a draft ordinance to amend the Los Angeles Municipal Code (LAMC) provisions relating to the Plumbing Code.

Summary of Ordinance Provisions

When this matter was considered by your Honorable Planning and Land Use Management (PLUM) Committee, the Committee requested that the City Attorney prepare the final ordinance based on the amended proposed ordinance submitted at the Committee meeting by the Department of Building and Safety (DBS) and attached to the Council file.

The enclosed draft ordinance would update the LAMC to be consistent with State law. In addition, the final ordinance includes amendments that are more restrictive than State law and are justified by the City's local climatic, geological or topographical conditions.

CEQA Determination

It appears that the ordinance is not a project subject to environmental review under the California Environmental Quality Act (CEQA). Under State CEQA Guidelines Section 15378(b)(2) and (b)(5), continuing administrative activities and organizational activities that will not result in direct or indirect physical changes in the environment are not CEQA projects. The ordinance makes administrative changes to existing portions of the Plumbing Code as contained within the LAMC. These changes make various technical changes to the existing regulations, eliminate obsolete code sections and clarify code sections. These changes will not result in any change to the physical environment.


Council Rule 38 Referral

The draft ordinance was sent, pursuant to Council Rule 38, to the Department of Building and Safety with a request that they provide any comments directly to the City Council or its Committees when the matter is considered.

If you have any questions regarding this matter, please contact Deputy City Attorney Kim Rodgers Westhoff at (213) 978-8242. She or another member of this Office will be present when you consider this matter to answer any questions you may have.

Very truly yours,

CARMEN A. TRUTANICH, City Attorney

By   
PEDRO B. ECHEVERRIA  
Chief Assistant City Attorney

PBE/KRW:mrc  
Transmittal

**ORDINANCE NO. \_\_\_\_\_**

An ordinance amending Article 4 of Chapter IX of the Los Angeles Municipal Code and incorporating by reference the 2010 Edition of the California Plumbing Code (C.P.C.) with certain exceptions.

**THE PEOPLE OF THE CITY OF LOS ANGELES  
DO ORDAIN AS FOLLOWS:**

Section 1. Section 94.100.0 of the Los Angeles Municipal Code is amended to read as follows:

**SEC. 94.100.0 BASIC PROVISIONS.**

Chapter 1, Division II of the California Plumbing Code (C.P.C.) is adopted by reference with the following exceptions: Sections 101.0, 101.1, 101.2, 101.3, 103.0, 103.1, 103.4, 103.5, and Table 1-1 of the California Plumbing Code are not adopted and, in lieu, Sections 94.101.0, 94.101.1, 94.101.2, 94.101.3, 94.101.6, 94.101.7, 94.103.0, 94.103.1, 94.103.4, 94.103.5, 94.103.10 through 94.103.20 and Table 1-A are added as provided in this Article.

Sec. 2. Subsection 4 of Section 94.101.3.6 of the Los Angeles Municipal Code is amended to read as follows:

4. Potable water piping with any of the following:
  - a. Systems requiring a 2-inch or larger supply.
  - b. Systems designed from the procedure in Section 610.5 of the California Plumbing Code.
  - c. Systems utilizing cross-linked polyethylene tubing (PEX) requiring a 2-inch or larger supply or when required by the conditions of approval of the City of Los Angeles Mechanical Testing Laboratory Research Report.
  - d. Systems utilizing CPVC piping requiring a 2-inch or larger supply or when required by the conditions of approval of the City of Los Angeles Mechanical Testing Laboratory Research Report.

**EXCEPTION:** Plan check is not required for existing systems that are added to or altered, with branch lines that serve fewer than 20 fixture units and sized by Table 6-4.

Sec. 3. Subsection 8 of Section 94.101.3.6. of the Los Angeles Municipal Code is deleted in its entirety and the current Subsections 9 and 10 are renumbered and amended to read as follows:

8. Swimming pool circulating water systems.

**EXCEPTION:** Private swimming pools.

9. Fire Protection.

a. Class H. Standpipes.

b. Standpipes: Class I, II, III.

c. Fire pump systems.

d. Fire hydrant systems.

e. Hand hose systems connected to fire sprinkler piping.

f. Monitor nozzle systems.

g. Underground fire protection piping.

h. Fire sprinkler systems.

**EXCEPTIONS:**

1. Raising or lowering of sprinklers due to change in ceiling height.

2. Replacing of sprinklers of the same type, orifice size and temperature rating.

3. Relocation of sprinklers in previously occupied buildings or tenant spaces.

Sec. 4. Section 94.103.3.4 is added to the Los Angeles Municipal Code to read as follows:

**94.103.3.4. Expiration of Permits.** Permits shall expire as provided for in Section 98.0602 of the Los Angeles Municipal Code.

Sec. 5. Section 94.103.3.5 is added to the Los Angeles Municipal Code to read as follows:

**94.103.3.5. Suspension or Revocation.** Permits may be revoked as provided in Section 98.0601 of the Los Angeles Municipal Code.

Sec. 6. Section 94.205.0. C. of the Los Angeles Municipal Code is amended by adding a new definition in alphabetical order to read as follows:

**Commercial Pre-rinse Spray Valves (PRSV).** Assemblies consisting of a flexible hose and spray head for attachment to a faucet with a built-in diverter.

Sec. 7. Section 94.206.0. D. of the Los Angeles Municipal Code is amended by adding a new definition in alphabetical order to read as follows:

**Dual Flush Toilet.** A toilet that has two flush modes, one at 1.1 gallons per flush or less and one at 1.6 gallons per flush or less with an effective 1.28 gallons per flush.

Sec. 8. Section 94.207.0. E. of the Los Angeles Municipal Code is amended by adding a new definition in alphabetical order to read as follows:

**Energy Star®.** A joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy. ENERGY STAR is a voluntary program designed to identify and promote energy-efficient products and practices.

Sec. 9. Section 94.218.0. P. of the Los Angeles Municipal Code is amended to read as follows

**SEC. 94.218.0. P.**

Section 218 of the C.P.C. is hereby adopted by reference with the following additions:

**Private or Private Use.** Refers to plumbing fixtures in residences and apartments, private bathrooms in hotels and hospitals, and restrooms in commercial establishments where the fixtures are intended for the use of a family and their guests or an individual.

**Public or Public Use.** All uses of fixtures or structures that are not defined as private or private use.

Sec. 10. Section 94.221.0. S. of the Los Angeles Municipal Code is amended to read as follows:

**SEC. 94.221.0. S.**

Section 221 of the C.P.C. is hereby adopted by reference with the following addition:

**Self-Closing Faucet.** A faucet designed to close itself as the activating mechanism is released.

Sec. 11. Section 94.400.0 of the Los Angeles Municipal Code is amended to read as follows:

**SEC. 94.400.0. BASIC PROVISIONS.**

Chapter 4 of the C.P.C. is hereby adopted by reference, except that Sections 402.1, 402.2 and 402.3 are not adopted and, in lieu, Sections 94.402.1.1, 94.402.3, 94.402.3.3, 94.402.3.4 and 94.402.4 and Table 4-0 are added.

Sec. 12. Section 94.402.1.1. is added to the Los Angeles Municipal Code to read as follows:

**94.402.1.1.** All plumbing fixtures shall meet the following flow rate requirements:

Fixture Type	Maximum Flow rate
Shower heads	2 gpm
Lavatory faucets for private use	1.5 gpm
Lavatory faucets for public use	0.5 gpm
Metered faucets	0.25 gallons per cycle
Kitchen faucets	2.2 gpm
Pre-rinse spray valves in commercial kitchen	1.6 gpm
All other faucets	2.2 gpm
Wash fountains	2.2 gpm
Water closets	1.28 gallons per flush
Urinals	0.125 gallons per flush
Domestic dishwasher	5.8 gallons per washing cycle
Commercial dishwashers	The maximum water use for high efficiency commercial dishwashers shall be in accordance with Table 4-0.

TABLE 4-0

WATER USE FOR COMMERCIAL DISHWASHER WATER USE<sup>1,2</sup>

Type	High-Temperature Maximum gallons per rack	Chemical Maximum gallons per rack
Conveyer	0.70	0.62
Door	0.95	1.16
Under-counter	0.90	0.98

1. The maximum water use per washing cycle for high efficiency domestic dishwashers shall be 5.8 gallons.

2. All installed dishwashers shall be Energy Star® rated.

Sec. 13. Section 94.402.3 is added to the Los Angeles Municipal Code to read as follows:

### **94.402.3. Urinals.**

Sec. 14. Section 94.402.3.3 is added to the Los Angeles Municipal Code to read as follows:

**94.402.3.3. Nonwater Supplied Urinals (Waterless Urinals). [HCD 1 & HCD 2] -** Waterless urinals sold or installed in this state shall comply with all of the following requirements:

1. Meet performance, testing, and labeling requirements established by ASME A112.1919-2006, Standard for Vitreous China Nonwater Urinals, for vitreous china non-water supplied urinals;
2. Be listed by an ANSI accredited third-party certification agency to ASME A 112.19.19-2006, Standard for Vitreous China Nonwater Urinals;
3. Follow cleaning and maintenance procedures established by the manufacturer;
4. Conform to reference standards in Table 14-1 for non-vitreous ceramic or plastic urinal fixtures; and
5. Provide water distribution and fixture supply piping, sized as required elsewhere in this Code, roughed-in immediately adjacent to each waterless urinal fixture installed.

For additional information, see the California Health and Safety Code Section 17921.4.

Sec. 15. Section 94.402.3.4. is added to the Los Angeles Municipal Code to read as follows:

**94.402.3.4. Nonwater Urinals. [Not adopted by OSHPD 1, 2, 3, and 4]** Nonwater urinals shall be listed and comply with the applicable standards referenced in Table 14-1. Nonwater urinals shall have a barrier liquid sealant to maintain a trap seal. Nonwater urinals shall permit the uninhibited flow of waste through the urinal to the sanitary drainage system. Nonwater urinals shall be cleaned and maintained in accordance with the manufacturer's instructions after installation. Where nonwater urinals are installed they shall have a water distribution line rough-in to the urinal location to allow for the installation of an approved backflow prevention device in the event of a retrofit.

Sec. 16. Section 94.402.4. is added to the Los Angeles Municipal Code to read as follows:

**94.402.4. Metered Faucets.** All faucets in public restrooms shall be self-closing or self-closing metering faucets.

Sec. 17. Section 94.600.0 of the Los Angeles Municipal Code is amended to read as follows:

**SEC. 94.600.0. BASIC PROVISIONS.**

Chapter 6 of the C.P.C. is hereby adopted by reference except Section 604.10 is not adopted and in lieu thereof Section 94.604.10 is added.

Sec. 18. Section 94.604.10 is added to the Los Angeles Municipal Code to read as follows:

**94.604.10.** Water pipes, plumbing fittings, fixtures, solder, and flux with lead content shall comply with the California Health and Safety Code Section 116875.

Sec. 19. Section 94.1100.0 of the Los Angeles Municipal Code is amended to read as follows:

**SEC. 94.1100.0. BASIC PROVISIONS.**

Chapter 11 of the C.P.C. is adopted by reference, except Sections 1101.11.2.2.2, 1101.13 and 1104.3 are not adopted and in lieu Section 94.1101.13 is added.

Sec. 20. Section 94.1101.13. is added to the Los Angeles Municipal Code to read as follows:

**94.1101.13.** All rainwater shall drain by gravity to a place of disposal satisfactory to the Department. If the rainwater cannot be drained by gravity, discharge into a sump may be permitted. Roof drainage shall not have a direct connection to a sump having an air-tight cover. Rainwater sumps serving "public use" occupancy buildings shall be provided with dual pumps arranged to function alternately in case of overload or mechanical failure. The pumps shall have an audio and visual alarm, readily accessible, that signals pump failure or an overload condition. The lowest inlet shall have a minimum clearance of two (2) inches (51 mm) from the high-water or "starting" level of the sump.

Sec. 21. Section 94.1500.0 of the Los Angeles Municipal Code is amended to read as follows:

**SEC. 94.1500.0. GENERAL.**

Chapter 15 of the C.P.C. is not adopted.

Sec. 22. Section 94.1600.0 of the Los Angeles Municipal Code is amended to read as follows:



**SEC. 94.1600.0. BASIC PROVISIONS.**

Chapter 16A of the C.P.C. is hereby adopted. Chapter 16 of the C.P.C. is not adopted.

Sec. 23. Section 94.1600.1 of the Los Angeles Municipal Code is amended to read as follows:

**94.1600.1.** Appendices A, B, D, G, I and K of the C.P.C. are hereby adopted by reference.

Sec. 24. Section 94.1700.0 of the Los Angeles Municipal Code is amended to read as follows:

**SEC. 94.1700.0. BASIC PROVISIONS.**

The 2009 Uniform Swimming Pool, Spa and Hot Tub Code is hereby adopted by reference.

Sec. 25. Article 4, Division 18 of the Los Angeles Municipal Code is amended to read as follows:

**DIVISION 18  
UNIFORM SOLAR ENERGY CODE**

**SEC. 94.1800.0. BASIC PROVISIONS.**

The 2009 Uniform Solar Energy Code, Chapters 2 through 8, is hereby adopted by reference.

Sec. 26. Section 94.2002.0 of the Los Angeles Municipal Code is hereby amended to read as follows:

**SEC. 94.2002.0. ADOPTED STANDARDS.** All fire sprinkler and standpipe design, installation and materials shall be in conformity with the 2010 Edition of the California Building Code and to the applicable portions of standards as specified in Table 20-1 of this Chapter, except when specified in this Chapter as modified or not adopted.

TABLE 20-1

FIRE PROTECTION STANDARDS.	STANDARD*
Installation of Sprinkler Systems	NFPA 13- 2010
Installation of Sprinkler Systems in Group R Occupancies Four or Fewer Stories	NFPA 13R- 2010
Installation of Sprinkler Systems in One- and Two-Family Dwellings	NFPA 13D- 2010
Standpipe and Hose Systems	NFPA 14- 2007
Centrifugal Fire Pumps	NFPA 20- 2007
Water Tanks for Private Fire Protection	NFPA 22- 2003
Private Fire Service Mains	NFPA 24- 2010
Standard for the Inspection, Testing, and Maintenance of Water –Based Fire Protection Systems	NFPA25-2006 California Edition
Cutting and Welding Processes	NFPA 51B- 2009
Hose Threads	NFPA 1963- 2009
Power Piping	ANSI/ASME B31-1- 2001

\*NFPA - Published by the National Fire Protection Association.

\*ANSI/ASME - Published by the American Society of Mechanical Engineers.

Other NFPA Standards as applicable in Section 2.2 of NFPA 13-2010 may be used by reference except when specified in this Chapter as modified or not adopted. Wherever reference is made to the Uniform Fire Code it shall mean the Los Angeles Fire Code.

Sec. 27. Section 94.2003.0 of the Los Angeles Municipal Code is hereby amended by deleting the definitions of **Authority Having Jurisdiction, Compartment,** and **Small Room** and listing the remaining definitions in proper alphabetical order.

Sec. 28. Section 94.2007.0. is added to the Los Angeles Municipal Code to read as follows:

**SEC. 94.2007.0. DRAINAGE REQUIREMENT FIRE PROTECTION SYTEMS.**

All drains shall terminate to an approved location as follows:

1. Drains shall terminate outside the building, subject to the approval of the Department;
2. Sanitary Sewer provided that the Sewer System is adequately sized per the Plumbing Code;

3. Discharge through the curb-face at the street; and

4. In high-rise buildings all drains shall terminate to the fire water storage tank, when available. In the event drains are located below the water level of the tank, a sump pump shall be provided to pump the water back to the fire water storage tank.

Sec. 29. Section 94.2010.0 of the Los Angeles Municipal Code is hereby amended to read as follows:

**SEC. 94.2010.0. NFPA-13.**

NFPA 13-2010 is adopted by reference with the following exceptions and modifications.

**94.2010.1.** NFPA 13-2010 Section 1.4 is not adopted.

**94.2010.2.** NFPA 13-2010 Section 3.2 is adopted by reference except that the following sections are not adopted:

**3.2.2. Authority Having Jurisdiction.**

**3.2.6. Standard.**

**94.2010.3.** NFPA 13-2010 Section 5.1.3 is added and modified to read as follows:

**5.1.3. Classification of Occupancies.** For the purpose of determining the level of protection to be provided by required sprinkler system installations, Table No. 5-1 of this Chapter shall be used.

For hazard classification other than those indicated, see appropriate nationally recognized standards for design criteria.

When fire sprinkles systems are required in buildings of undetermined use, they shall be designed and installed to have a sprinkler density of not less than that required of an Ordinary Hazard Group 2 use with a minimum design area of 3,000 square feet. Use is considered undetermined if not specified at the time of permit issued.

Where a subsequent occupancy requires a system with a greater capability, it shall be the responsibility of the occupant and/or owner to upgrade the system to the required density for the new occupancy.

**5.1.3.1. Group H, Division 5 Occupancies.** Where the design area of the sprinklers system consists of a corridor protected by one row of sprinklers, the maximum number of sprinkler required to be calculated is 13.

**5.1.3.2. Group L Occupancies.** Research laboratories and similar areas of group L occupancy shall not be less than that required for Ordinary Hazard Group 2 with a design area of not less than 3,000 square feet (279 m<sup>2</sup>)

TABLE NO. 5.1  
HAZARD CLASSIFICATION

OCCUPANCY OF BUILDING OR PORTION THEREOF	HAZARD CLASSIFICATION
<p>Group A Occupancies used as meeting rooms, library reading rooms, restaurant seating areas, clubs, theaters, museums, health clubs, educational classrooms and churches.</p> <p>Group B Occupancies used as offices, data processing areas, colleges and universities.</p> <p>Group E Occupancies other than shops and laboratories.</p> <p>Group I Occupancy living and sleeping areas</p> <p>Group R, Division I Occupancies<sup>1</sup>. Typically, one would expect that these uses are such that the quantity and combustibility of contents results in relatively low-rate-of-heat-release fires.</p>	<p>Light</p>
<p>Groups B, F, S and U Occupancies used for light manufacturing, commercial kitchens, laundries, automobile parking garages, bakeries, canneries, electronic plants, beverage manufacturing and glass products manufacturing plants not producing dust or fibers. In mixed occupancies housing group L occupancies, the portions of the building not classified as group L occupancy. Typically these uses are such that the quantity of combustibles is relatively low, the combustibility of contents is moderate, storage does not exceed 8 feet in height, and moderate-rate-of-heat-release fires would be expected.</p>	<p>Ordinary Group I</p>

<p>Groups B, F, M, and S Occupancies used for chemical plant laboratories, mercantile, machine shops, printing plants, library stack areas, metal working, wood product assembly, textile manufacturing, confectionery products, cold storage warehouses<sup>2</sup>, cereal mills, service stations and repair garages. Typically these uses are such that the quantity of combustibles is moderate. The combustibility of contents is moderate, storage does not exceed 12 feet in height<sup>2</sup> and moderate-rate-of-heat-release fires would be expected.</p> <p>Also:</p> <p>Group A Occupancies such as exhibition halls.</p> <p>Groups B, F and S Occupancies used as tobacco products manufacturing, paper and pulp mills, piers and wharfs, and warehousing<sup>2</sup> of higher combustible contents (including packaging).</p> <p>Group H Occupancies used as feed mills, tire manufacturing, chemical plants, repair garages and woodworking. Group H, Division 5 Occupancies, except storage rooms with dispensing- Research laboratories and similar areas of group L occupancy. Typically these uses are such that high-rate-of-heat-release fires would be expected and the spread of fire would be rapid.</p>	<p>Ordinary Group 2</p>
<p>Group H Occupancies used for printing (using inks with flashpoints below 100 degrees F.) combustible hydraulic fluid-use areas such as die casting and metal extruding, upholstering with plastic foam, rubber reclaiming, compounding, drying, milling, vulcanizing, plywood and particle board manufacturing, saw mills, textile picking, opening, blending, garneting, carding and combining of cotton, synthetics, wool shoddy or burlap. Typically these uses are such that a significant fire hazard exists.</p>	<p>Extra Hazard Group 1</p>
<p>Group H Occupancies used as asphalt saturating, flammable liquids spraying, flow coating, open oil quenching, varnish and paint dipping, solvent cleaning and manufactured home or modular building manufacturing (where the finished building enclosure is present and has combustible interiors). Storage rooms with dispensing located in Group H, Division 5 Occupancies. These uses are such that a severe fire hazard exists.</p>	<p>Extra Hazard Group 2<sup>3</sup></p>

1. See also Section 8.4.5 of NFPA 13- 2010.

2. For high-piled storage, see NFPA 13- 2010.

3. For additional and more stringent criteria, see California Fire Code Chapters 27, 28, 34 and the Los Angeles Fire Code.

**94.2010.4.** NFPA 13-2010 Section 6.1.1.2 is not adopted and NFPA 13-2010 Section 6.1.1.1 is modified to read as follows:

**6.1.1.1.** All materials and devices shall be listed and approved.

**94.2010.5.** NFPA 13-2010 Section 6.3.6.1 is added and modified to read as follows:

**6.3.6.1.** Other types of pipe or tube, such as plastic, may be used if it is investigated and found to be listed for this service.

**94.2010.6.** NFPA 13-2010 Section 6.7.1.3.3 is not adopted

**94.2010.7.** NFPA 13-2010 Section 6.9.1 is added and modified to read as follows:

**6.9.1.** Waterflow alarm apparatus shall be listed for the service and constructed and installed so that any flow of water from a sprinkler system equal to or greater than that from a single automatic sprinkler of the smallest orifice size installed on the system shall result in an audible alarm on the premises within two minutes after the flow begins.

**94.2010.8.** NFPA 13-2010 Section 6.9.4.1 is added and modified to read as follows:

**6.9.4.1.** Electrically operated alarm attachments forming part of an auxiliary, proprietary, remote station or local signaling system shall be installed in accordance with the Los Angeles Fire Code.

**94.2010.9.** NFPA 13-2010 Section 8.15.1.2.9 is added and modified to read as follows:

**8.15.1.2.9.** Concealed spaces with volumes not exceeding 160 cubic feet above a room or aggregate of rooms not exceeding 55 square feet in area, shall not require sprinkler protection.

**94.2010.10 Reserved.**

**94.2010.11. Reserved.**

**94.2010. 12. Reserved.**

**94.2010.13.** NFPA 13-2010 Section 8.15.1.2.15 is added and modified to read as follows:

**8.15.1.2.15.** Exterior columns under 10 ft<sup>2</sup> (0.93 m<sup>2</sup>) in total area, formed by studs or wood joist, with no sources of ignition within the column, supporting exterior canopies that are fully protected with a sprinkler system, shall not require sprinkler protection.

**94.2010.14.** NFPA 13-2010 Sections 8.15.4.1 through 8.15.4.5 are not adopted and Section 8.15.4 is added and modified to read as follows:

**8.15.4.** Water curtains shall consist of closely spaced sprinklers in combination with draft stops. The draft stops shall be located immediately adjacent to the opening shall be at least 18 inches deep and shall be of noncombustible or limited-combustible material that will stay in place before and during sprinkler operation. Sprinklers shall be spaced not more than six feet apart and placed six to 12 inches from the draft stop on the side away from the opening. Where sprinklers are closer than six feet, cross baffles shall be provided in accordance with Section 8.6.3.4.2 of NFPA-13.

**94.2010.15.** NFPA 13-2010 Section 8.15.7.1 is added and modified to read as follows:

**8.15.7.1.** Unless the requirements of 8.15.7.2 and 8.15.7.3 are met sprinklers shall be installed under exterior roofs, canopies, porte-cocheres, balconies, decks or similar projections exceeding 4ft (1.2m) in width.

**94.2010.16.** NFPA 13-2010 Section 8.15.7.2 is added and modified to read as follows:

**8.15.7.2.** Sprinklers shall be permitted to be omitted where the canopies, roofs, balconies, decks, or similar projections are constructed with materials that are noncombustible, limited-combustible, or fire retardant treated wood as defined in NFPA 703, Standard for Fire Retardant-Treated Wood and Fire Retardant Coatings for Building Materials.

**94.2010.17.** NFPA 13-2010 Section 8.15.7.3 is added and modified to read as follows:

**8.15.7.3.** Sprinklers shall be permitted to be omitted from below the canopies, roofs, balconies, decks, or similar projections of combustible construction, provided the exposed finish material on the roof, or canopy, is noncombustible, limited-combustible, or fire retardant treated wood as defined in NFPA 703, Standard for Fire Retardant-Treated Wood and Fire-Retardant Coatings for Building Materials, and the roofs, or canopies, contains only sprinklered concealed spaces or any of the following unsprinklered combustible concealed spaces:

1. Combustible concealed spaces filled entirely with noncombustible insulation.
2. Light or ordinary hazard occupancies where noncombustible or limited-combustible ceilings are directly attached to the bottom of solid wood joists so as to create enclosed joist spaces 160 ft<sup>3</sup> (4.5 m<sup>3</sup>) or less in volume, including space below insulation that is laid directly on top or within the ceiling joists in an otherwise sprinklered attic [See 11.2.3.1.4(4)(d)].
3. Concealed spaces over isolated small roofs, or canopies, not exceeding 55 ft<sup>2</sup>.

**94.2010.18.** NFPA 13-2010 Section 8.15.7.4 is not adopted.

**94.2010.19. Reserved.**

**94.2010.20.** NFPA 13-2010 Section 8.16.1.1.4 is added and modified to read as follows:

**8.16.1.1.4.** Where a system includes floor control valves, a hydraulic design information sign containing information for the floor shall be provided at each floor control valve. A hydraulic design information sign shall be provided for each area calculated. The installing contractor shall identify a hydraulically designed sprinkler system with a permanently marked weatherproof metal or rigid plastic sign secured with corrosion resistant wire, chain, or other approved means. Such signs shall be placed at the alarm valve, dry pipe valve, pre-action valve, or deluge valve supplying the corresponding hydraulically designed area.

**94.2010.21.** NFPA 13-2010 Section 8.16.1.1.5 is added and modified to read as follows:

**8.16.1.1.5.** Control valves, check valves, drain valves, antifreeze valves shall be readily accessible for inspection, testing, and maintenance. Valves located more than 6'-6" above the finished floor shall be provided with a means of opening and closing the valve from the floor level.

**94.2010.22.** NFPA 13-2010 Section 8.16.1.1.2.5 is added and modified to read as follows:

**8.16.1.1.2.5.** All valves controlling the water supply for automatic sprinkler systems and water-flow switches on all sprinkler systems shall be electrically monitored where required by the Los Angeles Building Code Section 91.903.4 and 91.903.4.1.

**EXCEPTION:** Underground key or hub valves in roadway boxes provided by the municipality or public utility need not be monitored.

**94.2010.23.** NFPA 13-2010 Section 8.16.1.1.7 is added and modified to read as follows:

**8.16.1.1.7. Valve Access.** All valves controlling water supplies for sprinkler systems or portions of the system shall be accessible. These valves shall be within six feet six inches of the floor or shall be operable from fixed ladders or clamped tread ladders on risers, or use chains within six feet six inches of the floor connected to valve hand wheels or other suitable means. All valves shall be provided with adequate clearance for normal operation.



**94.2010.24.** NFPA 13-2010 Section 8.16.1.1.9 is added and modified to read as follows:

**8.16.1.1.9. Floor (Level) Control Valves.**

1. Where required. In buildings with over two levels or two floors, a supervised valve capable of independently controlling the fire sprinkler system on each level, penthouse, roof structure, mezzanine and basement shall be installed. The maximum area covered by a single floor control valve shall not exceed the areas specified in section 8.2 of NFPA 13-2010.

**EXCEPTIONS:**

1. Floor control valves need not be provided for levels, penthouses, roof structures, mezzanines and basement with 20 or fewer fire sprinklers.

2. In partially sprinklered buildings, sprinklers serving window openings along an exit way or property line, or stair shafts and adjacent doors may have a sectional control valve to control the system in each of these areas instead of a floor control valve.

3. Valves required for hazardous locations may be located downstream of floor control valves.

4. One- and two-family dwellings.

2. Locations. Floor control valves shall be within a stairway enclosure or within the vestibule or on the access balcony of a smoke proof enclosure.

**EXCEPTIONS:**

1. In buildings with three or fewer stories or where there is no stairway that serves a floor, control valves may be located elsewhere on the floor level.

2. Unenclosed stairways in parking garages.

**94.2010.25.** NFPA 13-2010 Section 8.16.1.1.10 is added and modified to read as follows:

**8.16.1.1.10. Special Hazard Locations and Hazardous Occupancies.** The piping serving each linen chute, each paint spray booth, each trash chute,

including trash room, and each separate trash room shall be controlled by valves that control no other sprinklers.

**94.2010.26.** NFPA 13-2010 Section 8.16.1.2.6 is added and modified to read as follows:

**8.16.1.2.6.** Identification Pressure Regulators. Signs shall be posted at pressure regulators for fire sprinklers stating the required setting of the pressure regulator.

**94.2010.27.** NFPA 13-2010 Section 8.16.1.5.1 is added and modified to read as follows:

**8.16.1.5.1.** Private fire service main systems shall have sectional fire control valves at appropriate points in order to permit sectionalizing the system in the event of break or for the making of repairs or extensions:

**94.2010.28.** NFPA 13-2010 Section 8.16.1.5.1.1 is added and modified to read as follows:

**8.16.1.5.1.1.** Sectional control valves are not required when the fire service main system serves less than six fire appurtenances.

**94.2010.29.** NFPA 13-2010 Section 8.16.1.5.1.2. is added and modified to read as follows:

**8.16.1.5.1.2.** Sectional control valves shall be indicating valves in accordance with Section 6.7.1.3. NFPA 13-2010.

**94.2010.30.** NFPA 13-2010 Section 8.16.1.5.1.3. is added and modified to read as follows:

**8.16.1.5.1.3.** Sectional control valves shall be located so that no more than five fire appurtenances are affected by shut-down of any single portion of the fire service main. Each fire hydrant, fire sprinkler system riser, and standpipe riser shall be considered a separate fire appurtenance. In-rack sprinkler systems shall not be considered as a separate appurtenance.

**94.2010.31.** NFPA 13-2010 Section 8.16.1.5.1.4 is added and modified to read as follows:

**8.16.1.5.1.4.** The number of fire appurtenances between sectional control valves is allowed to be modified by the authority having jurisdiction.

**94.2010.32.** NFPA 13-2010 Section 8.16.1.5.1.5 is added and modified to read as follows:

**8.16.1.5.1.5.** Looped underground systems shall be provided with sectional valves regardless of the number of appurtenances.

**94.2010.33.** NFPA 13-2010 Section 8.16.1.5.2 is added and modified to read as follows:

**8.16.1.5.2.** A valve shall be provided on each bank where a main crosses a body of water or outside the building foundation(s) where the main or section of main runs under a building.

**94.2010.34.** NFPA 13-2010 Section 8.16.4.2.4 is not adopted.

**94.2010.35.** NFPA 13-2010 Section 8.17.1.1 is added and modified to read as follows:

**8.17.1.1.** Local water-flow alarms shall be provided on each sprinkler system having more than five sprinklers and shall be located in an area approved by the Administrative Authority.

**94.2010.36.** NFPA 13-2010 Sections 9.1.1.2 and 9.1.1.3 are not adopted, and NFPA 13-2010 Section 9.1.1.1 is added and modified to read as follows:

**9.1.1.1 General.** Types of hangers shall be in accordance with the requirements of Section 9.1 of NFPA 13-2010.

**EXCEPTION:** Hangers designed by a registered structural or civil engineer for lateral loads in accordance with Section 1613 of the Building Code and the requirements of Section 9.3.7 of NFPA 13-2010 shall be acceptable.

**94.2010.37.** NFPA 13-2010 Section 9.1.1.4.3 is added and modified to read as follows:

**9.1.1.4.3.** Fasteners as specified in 9.1.4 and 9.1.5 shall be permitted to be not listed.

**94.2010.38.** NFPA 13-2010 Section 9.1.3.1 is added and modified to read as follows:

**9.1.3.1.** Unless prohibited by 9.1.3.2 or 9.1.3.3, the use of listed inserts set in concrete and listed post-installed anchors to support hangers shall be permitted for mains and branch lines provided they meet the requirements of the LABC Sections 91.1613 and 91.1912 and require special inspection as required by Section 91.1704 of the LABC and installed in conformance with all listing requirements.

**94.2010.39.** NFPA 13-2010 Section 9.1.3.9.1.1 is added and modified to read as follows:

**9.1.3.9.1.1.** Powder-driven studs used for attaching hangers to the building structure are prohibited in Seismic design Categories C, D, E and F.

**94.2010.40.** NFPA 13-2010 Section 9.3.5.6.1 is added and modified to read as follows:

**9.3.5.6.1.** Unless the requirements of section 9.3.5.6.2 are met, the horizontal loads for braces shall be determined by analysis based on horizontal force of  $F_p=0.76 W_p$ , where  $F_p$  is the horizontal force factor and  $W_p$  is 1.15 times the weight of the water filled piping

**94.2010.41.** NFPA 13-2010 Section 9.3.5.8.7 is added and modified to read as follows:

**9.3.5.8.7.** Where pipe is used for sway bracing, it shall have a wall thickness of not less than Schedule 40. The loads determined in 9.3.5.6 shall not exceed the lesser of the maximum allowable loads provided in Table 9.3.5.8.7(a), Table 9.3.5.8.7(b), and Table 9.3.5.8.7(c) or the manufacturer's certified maximum allowable horizontal loads for 30- to 44-degree, 45- to 59-degree, 60- to 89-degree, and 90-degree brace angles.

**94.2010.42.** NFPA 13-2010 Section 9.3.5.8.10 is not adopted.

**94.2010.43.** NFPA 13-2010 Section 9.3.5.9.4 is added and modified to read as follows:

**9.3.5.9.4.** Where lag screws or power-driven fasteners shall not be used to attach sway braces to the building structure.

**94.2010.44.** NFPA 13-2010 Section 9.3.5.9.6 is added and modified to read as follows:

**9.3.5.9.6.** Fastening methods other than those identified in 9.3.5.9 and 9.3.5.8.10 shall not apply to other fastening methods, which shall be acceptable for use if certified by a registered professional engineer to support the loads determined in accordance with the criteria in 9.3.5.6. Calculations shall be submitted to the authority having jurisdiction.

**94.2010.45.** NFPA 13-2010 Section 9.3.5.9.7.2 is added and modified to read as follows:

**9.3.5.9.7.2.** Concrete anchors other than those shown in Figure 9.3.5.9.1 and identified in 9.3.5.8.10 shall be acceptable for use where designed in accordance with the requirements of the building code and certified by a registered professional engineer.

**94.2010.46.** NFPA 13-2010 Section 9.3.6.1(3) is added and modified to read as follows:

**9.3.6.1(3).** No. 12, 440 lb (200Kg) wire installed at least 45 degrees from the vertical plane and anchored on both sides of the pipe. Powder-driven fasteners for attaching restraint are allowed to be used provided that the restraint component does not support the dead load.

**94.2010.47.** NFPA 13-2010 Section 9.3.7.7 is not adopted.

**94.2010.48.** NFPA 13-2010 Section 9.3.7.9 is amended and modified to read as follows:

**9.3.7.9.** The systems are required to be protected against earthquakes using a horizontal force factor exceeding 0.50 Wp, where Wp is the weight of the water-filled pipe.

**94.2010.49.** NFPA 13-2010 Section 10.6.5. is added and modified to read as follows:

**10.6.5.** Pipe joints shall not be located under foundation footings. The pipe under the building or building foundation shall not contain mechanical joints.

**EXCEPTIONS:**

1. Where allowed in accordance with 10.6.2;
2. Alternate designs may be utilized where designed by a registered professional engineer and approved by the enforcing agency.

**94.2010.50.** NFPA 13-2010 Section 10.9.1 is added and modified to read as follows:

**10.9.1.** Backfill shall be well tamped in layers or puddle under and around pipes to prevent settlement or lateral movement. Backfill shall consist of clean fill sand or pea gravel to a minimum of 6" below and to a minimum of 12" above the pipe and shall contain no ashes cinders, refuse, organic matter, or other corrosive materials. Other backfill materials and methods are permitted where designed by a registered professional engineer and approved by the enforcing agency.

**94.2010.51.** NFPA 13-2010 Section 11.1.6.6 is added and modified to read as follows:

**11.1.6.6** When hose valves for Fire Department use are attached to wet pipe sprinkler system risers in accordance with Section 8.17.5.2 of NFPA 13-2010:

1. The water supply shall not be required to be added to the standpipe demand as determined from Section 94.2020 of this chapter.

2. Where the combined sprinkler system demand and hose stream allowance of Table 11.2.3.1.2 of NFPA 13-2010 exceeds the requirements of Section 94.2020 of this division, this higher demand shall be used.

3. For partially sprinklered buildings, the sprinkler demand, not including hose stream allowance, as indicated in Table 11.2.3.1.1 of NFPA 13-2010, shall be added to the requirements given in Section 94.2020 of this Division.

**94.2010.52.** NFPA 13-2010 Section 11.2.3.1.4(4)(i) is added and modified to read as follows:

**11.2.3.1.4(4) (i).** Exterior columns under 10 ft<sup>2</sup> (0.93m<sup>2</sup>) in total area, formed by studs or wood joist, with no sources of ignition within the column, supporting exterior canopies that are fully protected with a sprinkler system.

**94.2010.53.** NFPA 13-2010 Section 11.2.3.2.3.1 is added and modified to read as follows:

**11.2.3.2.3.1.** Where listed quick-response sprinklers, excluding extended coverage quick-response sprinklers, are used throughout a system or portion of a system having the same hydraulic design basis, the system area of operation shall be permitted to be reduced without revising the density as indicated in Figure 11.2.3.2.3.1 when all of the following conditions are satisfied:

1. Wet pipe system;
2. Light hazard occupancy;
3. 20 ft (6.1 m) maximum ceiling height; and
4. There are no unprotected ceiling pockets as allowed by Sections 8.6.7 and 8.8.7 exceeding 32 ft<sup>2</sup> (3 m<sup>2</sup>).

**94.2010.54.** NFPA 13-2010 Section 11.2.3.2.3.2 is added and modified to read as follows:

**11.2.3.2.3.2.** The number of sprinklers in the design area shall never be less than seven.

**94.2010.55.** NFPA 13-2010 Section 11.3.3.5 is added and modified to read as follows:

**11.3.3.5.** When the water curtain is located in an otherwise un-sprinklered area, the design shall include all the sprinklers in each fire separation area being protected.

**94.2010.56.** NFPA 13-2010 Section 12.2.1 is added and modified to read as follows:

**12.2.1.** Except as allowed by section 12.2.2, small hose connections 1 ½ (38mm) shall be provided where the system is not subject to freezing in accordance with 8.17.5 for first-aid-fire-fighting and overhaul operations.

**94.2010.57.** NFPA 13-2010 Section 23.1.7 is not adopted.

**94.2010.58.** NFPA 13-2010 Section 24.1 is added and modified to read as follows:

**24.1.** Approval of Sprinkler Systems and Private Fire Service Mains.

The installing contractor shall do the following:

1. Notify the authority having jurisdiction and the property owner or property owner's authorized representative of the time and date testing will be performed;
2. Perform all required testing (see Section 24.2);
3. Complete and sign the appropriate contractor's material and test certificate(s) (see Figure 24.1);
4. Remove all caps and straps prior to placing the sprinkler system in service; and
5. Upon system acceptance by the authority having jurisdiction a label prescribed by Title 19 California Code of Regulations, Chapter 5 shall be affixed to each system riser.

**94.2010.59.** NFPA 13-2010 Section 24.4 is added and modified to read as follows:

**24.4.** Instructions.

The installing contractor shall provide the property owner or the property owner's authorized representative with the following:

1. All literature and instructions provided by the manufacturer describing proper operation and maintenance of any equipment and devices installed;
2. NFPA 25, Standard for the inspection, testing, and maintenance of Water-Based Fire Protection Systems, 2006 California Edition; and

3. Title 19, California Code of Regulations, Chapter 5, "Fire Extinguishing Systems".

**94.2010.60.** NFPA 13-2010 Section 24.5.1 is added and modified to read as follows:

**24.5.1 .** "Pipe schedule systems shall be provided with a sign indicating that the system was designed and installed as a pipe schedule system and the hazard classification(s) included in the design."

**94.2010.61.** NFPA 13-2010 Section 24.5.2 is added and modified to read as follows:

**24.5.2 .** The sign shall include the following information:

1. Location of the design area or areas;
2. Discharge densities over the design area or areas;
3. Required flow and pressure of the system at the base of the riser;
4. Presence of high piled storage;
5. Maximum height of storage planned;
6. Aisle width planned;
7. Required flow and pressure of the system at the water supply source;
8. Required flow and pressure of the system at the discharge side of the fire pump where a fire pump is installed;
9. Type or types and number of sprinklers or nozzles installed including the orifice size, temperature rating, orientation, K-Factor, Sprinkler Identification Number (SIN) for sprinkler heads when applicable and response type;
10. The minimum discharge flow rate and pressure required from the hydraulically most demanding sprinkler;
11. The required pressure settings for pressure reducing valves;
12. For deluge sprinkler systems, the required flow and pressure at the hydraulically most demanding sprinkler or nozzle;



13. The protection area per sprinkler based on the hydraulic calculations; and

14. The edition of NFPA 13 to which the system was designed and installed.

Sec. 30. Section 94.2013.0. of the Los Angeles Municipal Code is hereby amended to read as follows:

**SEC. 94.2013.0 NFPA-13-R.**

NFPA 13R-2010 is adopted by reference with the following exceptions and modifications:

**94.2013.1.** NFPA 13R-2010 Section 3.2 is adopted by reference except that the following sections are not adopted:

**3.2.2. Authority Having Jurisdiction.**

**3.2.7. Standard.**

**94.2013.2.** NFPA 13R-2010 Section 4.1 is added and modified to read as follows:

**4.1. Sprinklered Throughout.** A building provided with a fire sprinkler system designed and installed in accordance with the requirements of section 94.2013 of this chapter, including its allowable omissions, shall be considered fully sprinklered throughout.

**94.2013.3.** NFPA 13R-2010 Section 4.3 is added and modified to read as follows:

**4.3. Basic Requirements.** The requirements for spacing, location, and position of sprinklers shall be based on the following principals:

1. Sprinklers shall be installed throughout the premises;
2. Sprinklers shall be located so as not to exceed maximum protection area per sprinkler;
3. Sprinklers shall be positioned and located so as to provide satisfactory performance with respect to activation time and distribution; and
4. Sprinklers shall be permitted to be omitted from areas specifically allowed by this standard. (see section 6.6).

**94.2013.4.** NFPA 13R-2010 Section 4.5 is not adopted.

**94.2013.5.** NFPA 13R-2010 Section 5.1.4.1 is not adopted.

**94.2013.6.** NFPA 13R-2010 Section 5.2.11 is added and modified to read as follows:

**5.2.11** Welded pipe shall be permitted to be used in accordance with the rules of Section 94.2010 of this Division.

**94.2013.7.** NFPA 13R-2010 Section 5.2.12.1.3.3 is not adopted.

**94.2013.8.** NFPA 13R-2010 Section 5.3 is not adopted.

**94.2013.9.** NFPA 13R-2010 Section 5.4.3 is modified by changing the reference "NFPA 13" to "Section 94.2010 of this division."

**94.2013.10.** NFPA 13R-2010 Section 6.4.4 is not adopted.

**94.2013.11.** NFPA 13R-2010 Section 6.6.3 is modified by changing the reference "NFPA 220" to the "Building Code."

**94.2013.12.** NFPA 13R-2010 Sections 6.6.5, 6.6.6 and 6.6.7 are not adopted.

**94.2013.13.** NFPA 13R-2010 Section 6.6.7.1 is added and modified to read as follows

**6.6.7.1** Balconies and decks. Sprinkler protection shall be provided for exterior balconies, decks and ground floor patios of dwelling units where the building is of type V construction provided there is a roof or deck above Sidewall sprinklers that are used to protect such areas shall be permitted to be located such that their deflectors area within the 1 inch (25mm) to 6 inches (152mm) below the structural members and a maximum distance of 14 inches (356mm) below the deck of the exterior balconies and decks that are constructed of open wood joist construction.

**94.2013.14.** NFPA 13R-2010 Section 6.11.2 is added and modified to read as follows:

**6.11.2** Fire Department Connection. See Section 94.2020 of this chapter for requirements.

**94.2013.15.** NFPA 13R-2010 Section 6.13 is modified by changing the reference "NFPA 13" to "Section 94.2010 of this Division."

**94.2013.16. Reserved.**

**94.2013.17.** NFPA 13R-2010 Section 6.14 is modified by changing the reference "NFPA 13" to "Section 94.2010 of this Division."

**94.2013.18.** NFPA 13R-2010 Section 6.16.3 is modified by changing the reference "NFPA 13" to "Section 94.2010 of this Division."

**94.2013.19.** NFPA 13R-2010 Section 7.1.2 is modified by changing the reference "NFPA 13" to "Section 94.2010 of this Division."

**94.2013.20.** NFPA 13R-2010 Section 7.2 is modified by changing the reference "NFPA 13" to "Section 94.2010 of this Division."

**94.2013.21.** NFPA 13R-2010 Section 7.3 is modified by changing the reference "NFPA 13" to "Section 94.2010 of this Division."

**94.2013.22.** NFPA 13R-2010 Section 7.4 is modified by changing the reference "NFPA 13" to "Section 94.2010 of this Division."

**94.2013.23.** NFPA 13R-2010 Section 9.3 is modified by changing the reference "NFPA 13" to "Section 94.2010 of this Division" and "NFPA 22" to "Section 94.2050 of this Division."

**94.2013.24.** NFPA 13R-2010 Section 9.4 is added and modified by changing the reference "NFPA 20" to "Section 94.2030 of this Division."

**94.2013.25.** NFPA 13R-2010 Section 9.6 is modified by changing the reference "NFPA 13" to "Section 94.2010 of this Division."

**94.2013.26.** NFPA 13R-2010 Section 10.1.5 is added and modified to read as follows:

**10.1.5 Instructions.**

The installing contractor shall provide the property owner or the property owner's authorized representative with the following:

1. All literature and instructions provided by the manufacturer describing proper operation and maintenance of any equipment and devices installed; and

2. NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems 2006 California Edition and Title 19, California Code of Regulations, Chapter 5. (3) Once the system is accepted by the authority having jurisdiction a label as prescribed by Title 19, California Code of Regulations, Chapter 5, shall be affixed to each system riser.

**94.2013.27.** NFPA 13R-2010 Section 10.2.2 is modified by changing the reference "NFPA 13" to "Section 94.2010 of this Division."

Sec. 31. Section 94.2014.0. of the Los Angeles Municipal Code is hereby amended to read as follows:

**SEC. 94.2014.0. NFPA-13-D.**

NFPA 13D-2010 is adopted by reference with the following exceptions, modifications and additions:

**94.2014.1.** NFPA 13D-2010 Section 3.2 is adopted by reference except that the following sections are not adopted:

**3.2.2. Authority Having Jurisdiction.**

**3.2.7. Standard.**

**94.2014.2.** NFPA 13D-2010 Section 3.3.9 is adopted by reference, except that the following section is not adopted.

**3.3.9.7. Sprinkler System.**

**94.2014.3.** Section 5.1.2 is not adopted.

**94.2014.4.** Section 5.1.3 is not adopted.

**94.2014.5.** Section 5.1.4 is added and modified to read as follows:

**5.1.4. Fire Department Connections.** Fire Department connections for one and two family dwellings shall meet the following requirements:

1. A Fire Department connection shall be provided for any system protecting over 10,000 square feet of habitable space;
2. A single Fire Department connection pipe may be as small as the sprinkler riser, provided the riser is three inches or smaller; and
3. The hose inlet fitting may be 1-1/2 inches with 1.5-9 N.H. thread of 2.5-7.5 N.H. standard threads.

**94.2014.6.** Section 6.2 is added and modified to read as follows:

**6.2. Water Supply Sources.** When the requirements of 6.2.2 are met, the following water supply sources shall be considered to be acceptable by this standard:

1. A connection to a reliable waterworks system with or without an automatically operated pump;
  2. An elevated tank;
  3. A pressure tank designed to American Society of Mechanical Engineers (ASME) standards for a pressure vessel with a reliable pressure source;
  4. A stored water source with an automatically operated pump;
- and
5. A well with a pump of sufficient capacity and pressure to meet the sprinkler demand. The stored water requirement of 6.1.2 or 6.1.3 shall be permitted to be a combination of the water in the well (including the refill rate) plus the water in the holding tank if such tank can supply the sprinkler system.

**94.2014.7.** NFPA 13D-2010 Section 6.2.2 is added and modified to read as follows:

**6.2.2** Where a well, pump, tank or combination thereof is the source of supply for a fire sprinkler system, the water supply shall serve both domestic and fire sprinkler systems, and the following shall be met:

1. A test connection shall be provided downstream of the pump that creates a flow of water equal to the smallest sprinkler on the system. The connection shall return water to the tank;
2. Any disconnecting means for the pump shall be approved;
3. A method for refilling the tank shall be piped to the tank;
4. A method of seeing the water level in the tank shall be provided without having to open the tank; and
5. The pump shall not be permitted to sit directly on the floor.

**94.2014.8.** NFPA 13D-2010 Section 6.2.2.1 is added and modified to read as follows:

**6.2.2.1** Where a fire sprinkler system is supplied by a stored water source with an automatically operated means of pressurizing the system other than an electric pump, the water supply may serve the sprinkler system only.

**94.2014.9.** NFPA 13D-2010 Section 6.2.4 is added and modified to read as follows:

**6.2.4** Where a water supply serves both domestic and fire sprinkler systems, 5 gpm (19 L/min) shall be added to the sprinkler system

demand at the point where the systems are connected, to determine the size of common piping and the size of the total water supply requirements where no provision is made to prevent flow into the domestic water system upon operation of a sprinkler.

**94.2014.10.** NFPA 13D-2010 Section 7.5.1 is added and modified to read as follows:

**7.5.1.** Listed residential sprinklers shall be used unless another type is permitted by Sections 7.5.3 or 7.5.4.

**EXCEPTION:** Listed quick response commercial sprinklers may be installed when construction features exist that are outside the scope of residential sprinkler listings and the hydraulic design is in accordance with Section 8.1.2 as set forth in Subsection 11 of Section 94.2014 of this Division.

**94.2014.11.** NFPA 13D-2010 Section 8.1.2 is added and modified to read as follows:

**8.1.2.** Number of Design Sprinklers. The number of design sprinklers shall include all sprinklers within a compartment, up to a maximum of two sprinklers, under a flat, smooth, horizontal ceiling. For compartments containing two or more sprinklers, calculations shall be provided to verify the single operating criteria and the two operating sprinkler criteria.

**EXCEPTIONS:**

1. Single family dwellings having more than 10,000 square feet of habitable space shall follow the design requirements of Section 94.2013 of this Division.
2. Attached private garages greater than 1500 square feet shall follow the design requirements of Section 94.2010 of this Division.
3. When listed quick response sprinklers are utilized within a dwelling, the hydraulic design shall follow the requirements of Section 94.2010 of this Division.

**94.2014.12.** NFPA 13D-2010 Section 8.1.3.1.2 is not adopted.

**94.2014.13.** NFPA 13D-2010 Section 8.6.4 of NFPA 13D is not adopted.

Sec. 32. Section 94.2020.0 of the Los Angeles Municipal Code is hereby amended to read as follows:

**SEC. 94.2020.0. NFPA-14.**

NFPA 14-2007 is adopted by reference with the following exceptions, modifications, and additions:

**94.2020.1.** NFPA 14-2007 Sections 1.3. through 1.3.3 are not adopted.

**94.2020.2.** NFPA 14-2007 Chapter 2 is not adopted.

**94.2020.3.** NFPA 14-2007 Sections 3.2. is adopted by reference, except that the following section is not adopted:

**3.2.2. Authority Having Jurisdiction.**

**94.2020.4.** NFPA 14-2007 Sections 3.3.3. through 3.3.3.2. are not adopted.

**94.2020.5.** NFPA 14-2007 Section 4.1.3. is not adopted.

**94.2020.6.** NFPA 14-2007 Section 4.5.1.3. is not adopted.

**94.2020.7.** NFPA 14-2007 Section 4.6.4. is added and modified to read as follows:

**4.6.4. Nozzles.** Nozzles provided for Class II standpipe outlets shall be listed variable fog nozzles.

**94.2020.8.** NFPA 14-2007 Section 4.8.2. is added and modified to read as follows:

**4.8.2.** Each Fire Department connection shall have at least two 2-1/2 inch internal threaded swivel fittings having NH standard threads as specified in NFPA 1963, Standard for Screw Threads and Gaskets for Fire Hose Connections.

The number of Fire Department hose inlets shall be at least as required in Table No. 4.8.2 of this chapter. Fire Department connections shall be equipped with caps to protect against entry of debris into the system.

TABLE 4.8.2  
NUMBER OF FIRE DEPARTMENT CONNECTIONS

HEIGHT OF HIGHEST OUTLET ABOVE FIRE DEPARTMENT CONNECTION, FEET	NUMBER OF FIRE DEPARTMENT CONNECTIONS	
	1 or 2 Risers	3 or more Risers
Less than 50	2	2
50 and over	4	6

**94.2020.9.** NFPA 14-2007 Section 5.1.3. is added and modified to read as follows:

**5.1.3.** The spacing and location of standpipes and hose connections shall be in accordance with Section 905 of the Building Code.

**94.2020.10.** NFPA 14-2007 Section 5.1.4. is not adopted.

**94.2020.11.** NFPA 14-2007 Section 5.3.3. is added and modified to read as follows:

**5.3.3. Class III Systems.** Class III is a standpipe system directly connected to a water supply and equipped with 2-1/2 inch outlets or 2-1/2 inch and 1-1/2 inch outlets when a 1-1/2 inch hose is required. Hose connections for Class III systems may be made through 2-1/2 hose valves with easily removable 2-1/2 inch by 1-1/2 inch reducers.

**94.2020.12.** NFPA 14-2007 Section 5.5.2. is added and modified to read as follows

**5.5.2.** A valved outlet for a pressure gauge shall be installed on the upstream and downstream sides of every pressure regulating device.

**EXCEPTION:** Class I and Class III hose outlets.

**94.2020.13.** NFPA 14-2007 Section 6.1.2.5. is added and modified to read as follows:

**6.1.2.5.** To minimize or prevent pipe breakage where subject to earthquakes, standpipe systems shall be protected in accordance with Section 94.2010 of this Division.

**94.2020.14.** NFPA 14-2007 Section 6.3.4.1. is added and modified to read as follows:

**6.3.4.1.** Valves shall be within six feet six inches of the floor or shall be operable from fixed ladders or clamped tread ladders on risers, or use chains within six feet six inches of the floor connected to valve hand wheels or other suitable means.

**94.2020.15.** NFPA 14-2007 Section 6.3.7.1 is added and modified to read as follows:

**6.3.7.1.** System water supply valves, isolation control valves, and other valves in fire mains shall be supervised in an approved manner in the open position by one of the following methods:

1. Where a building has a fire alarm system or a sprinkler monitoring system installed, the valve shall be supervised by:

a. A central station, proprietary, or remote supervising station; or

b. A local signaling service that initiates an audible signal at a constantly attended location.



2. Where a building does not have a fire alarm system or a sprinkler monitoring system installed, the valve shall be supervised by:

- a. Locking the valves in the open position; or
- b. Sealing of valves and a approved weekly recorded inspection where valves are located within fenced enclosures under the control of the owner.

**94.2020.16.** NFPA 14-2007Section 6.4.5.3 is added and modified to read as follows:

**6.4.5.3.** Fire Department inlets shall supply all Class I and Class III standpipes except for buildings with multiple zones.

In buildings which have multiple zones, each zone shall be provided with separate inlet connections.

Where the Fire Department inlet connection does not serve the entire building, the portions served shall be suitably identified.

The Fire Department connection shall be adequate to supply the required flow and pressure.

**94.2020.17.** NFPA 14-2007Section 7.2.2 is added and modified to read as follows:

**7.2.2.** When system pressure-regulating device(s) are used in lieu of providing separate pumps, multiple zones shall be permitted to be supplied by a single pumping system and pressure-regulating device(s) under the following conditions:

1. Pressure-regulating device(s) shall be permitted to control pressure in the lower division;
2. A method to isolate the pressure-regulating device(s) shall be provided for maintenance and repair;
3. Regulating devices shall be arranged so that the failure of any single device does not allow pressure in excess of 175 psi (12.1 bar) to more than two hose connections;
4. An equally sized bypass around the pressure-regulating device(s), with a normally closed control valve, shall be installed;
5. Pressure-regulating device(s) shall be installed not more than 7 ft 6 in (2.31 m) above the floor;

6. The pressure-regulating device shall be provided with inlet and outlet pressure gauges;

7. The fire department connection(s) shall be connected to the system side of the outlet isolation valve;

8. The pressure-regulating device shall be provided with a pressure relief valve in accordance with the manufacturers recommendations;

9. Remote monitoring and supervision for detecting high pressure failure of the pressure-regulating device shall be provided in accordance with NFPA 72, National Fire Alarm Code; and

10. The pumping system shall be adequate when three pumps are out of operation.

**94.2020.18.** NFPA 14-2007 Section 7.3.1.1 is added and modified to read as follows:

**7.3.1.1.** Fire Department Outlets. Fire Department outlets shall be installed so as to be easily accessible for use by the Fire Department. Hose connections and hose stations shall be located not less than three feet or more than five feet above the floor. A wrench clearance on all sides of the outlet shall be provided to insure that a 12-inch long wrench can be used to connect hose to outlet. There shall be at least one-inch clearance around the hose valve handle. Outlets shall be provided with a listed hose valve protected by a 2-1/2 inch by 1-1/2 inch reducer and 1-1/2 inch cap and attachment chain.

**94.2020.19.** NFPA 14-2007Section 7.3.2 is added and modified to read as follows:

**7.3.2. Class I Systems.** Class I systems shall be provided with 2 ½ in. (65mm) hose connections in the following locations:

1. At the main floor landing in exit stairways;
2. On each side of the wall adjacent to the exit openings of horizontal exits;
3. In other than covered mall buildings, in each exit passageway at the entrance from the building areas to the passageway;
4. In covered mall buildings, at the entrance to each exit passageway or exit corridor, and at the interior side of public entrances from the exterior to the mall; and

5. At the highest landing of stairways with stairway access to a roof, or on roofs with a slope of less than 4 in 12 where stairways do not access the roof.

**94.2020.20.** NFPA 14-2007 Section 7.9 is added and modified to read as follows:

### **7.9. System Zoning Requirements.**

**7.9.2. Height Limit.** Buildings shall be zoned so that standpipe system risers do not exceed 275 feet in height unless control of the nozzle pressure under both flow and static conditions is attained at each standpipe outlet by the installation of a listed pressure-regulating device and provided further that all of the following three limitations are met:

1. The pressure on the listed pressure-regulating device inlet side is not in excess of the rated working pressure of the listed pressure-regulating device and the remaining portions of the standpipe system are rated for not less than the maximum system pressure;
2. The hose valve outlet pressure is limited as required in Section 7.2.1.2 of NFPA-14; and
3. The zone height does not exceed 400 feet.

**7.9.3.** Zoned systems shall comply with Alternate 1 or 2, below:

1. **Alternate 1.** The pumping system shall be adequate when three pumps are out of operation.
2. **Alternate 2.** Design shall comply with the following:  
When fire pumps are required, separate fire pumps shall be required to serve each zone. Fire pumps that individually serve separate zones and which are located at the same level may be installed in series. Fire pumps installed in series shall serve each zone independently.

**7.9.3.1.** and **7.9.3.2.** are not adopted.

**7.9.4.** Direct supply piping from the higher-zone fire pump to the higher-zone system piping shall be provided when the fire pump for the higher zone is on the same level as the fire pump serving the lower zone. Two direct supply lines shall be provided to each zone with two or more standpipes. The size of the direct supply piping to each zone shall be not less than the size of the largest standpipe riser served.

Lower-zone standpipe piping may be used to supply the higher zone and shall not be less than the size of the largest standpipe riser of the higher-zone system

that is being supplied. The two zones shall be connected by a minimum of two supply pipes of which one shall be automatically providing water to the higher zone from the lower zone. A secondary method of supply is required when a residual pressure of 100 psi cannot be provided.

**7.9.4.1** is not adopted.

**94.2020.21.** NFPA 14-2007 Section 7.10.1.3.1.1 is added and modified to read as follows:

**7.10.1.3.1.1.** Where the sprinkler system water supply requirement, including the water stream allowance as determined in accordance with Section 2010 of this Division, exceeds the system demand established by Sections 7.7 and 7.10.1 of NFPA-14, the larger of the two values shall be provided.

**94.2020.22.** NFPA 14-2007 Subsections (3) and (5) of Section 9.1.5 are not adopted.

**94.2020.23.** NFPA 14-2007 Section 9.2.1 is added and modified to read as follows:

**9.2.1. Buildings Over 150 Feet High.**

**1. Redundancy.** The system shall be adequate when either one pump, one pump driver, one riser or zone pressure regulator is out of operation.

**2. Power.** Pumps shall be either diesel engine or electric motor driven. Electric fire pump motors shall be supplied from normal and the emergency standby power system. At least 750 g.p.m. shall be supplied by an electric motor driven pump.

If water flow requirements call for more than one pump to start, the normal and emergency power shall be sized to run all pumps at the same time. The normal and emergency power system shall have adequate capacity and rating for all loads, including the redundant pump(s) to be operated simultaneously. The controller for each unit of multiple pumps shall incorporate a sequential timing device to prevent any one driver from starting simultaneously with any other. Failure of a leading driver to start shall not prevent subsequent drivers from starting. Locking out of motors is prohibited.

**94.2020.24.** NFPA 14-2007 Section 11.2.3 is added and modified to read as follows:

**11.2.3. Flushing the System Risers.** Water shall flow from the topmost outlet of each riser until the system is clear of all debris.

**11.2.3.1. Roof Outlets.** Standpipe systems shall be designed so that all risers can be flushed through outlets located on the roof.

**11.2.3.2. Flow.** All standpipe risers shall be flushed individually through the roof at residual pressure of at least 65 psi until the system is clear of debris. The flow for Class I and Class III standpipes shall be at least 500 g.p.m. through each riser.

**94.2020.25.** NFPA 14-2007 Section 11.5.6.3 is added and modified to read as follows:

**11.5.6.3. Pressure Regulator Valve Test.**

**11.5.6.3.1. Test Required.** When required by the Department, 2-1/2 inch pressure regulator valves installed on standpipe outlets shall be tested for proper operation at a flow of 300 g.p.m. with a residual pressure of 125 psi in the presence of a representative of the Department.

**11.5.6.3.2. Safety.** Test nozzles and other equipment shall be adequately secured so as to eliminate danger to personnel.

**11.5.6.3.3. Opening.** An accessible 2-1/2 inch capped or plugged test opening shall be installed adjacent to each pressure regulator valve.

**11.5.6.3.4. Drain.** The test openings shall drain to a minimum 3-inch drain line constructed and installed as required for fire sprinkler drains. The drains shall not discharge where they may cause damage. Where available, drains shall terminate to the fire water storage tank.

**11.5.6.3.5. Interconnection.** The test drain shall either be separate or connect to a fire sprinkler drain to a fire protection tank.

**94.2020.26.** NFPA 14-2007 Chapter 12 is added and modified to read as follows:

**Buildings Under Construction.**

**12.1. General.** During the construction of a building and until the permanent fire-extinguishing system has been installed and is in service, fire protection shall be provided in accordance with this section.

**12.2. Where required.** Every building four stories or more in height shall be provided with at least one standpipe for use during construction. The standpipes shall be installed when the progress of construction is not more than 40 feet (12.19 m) in height above the lowest level of Fire Department access. The standpipe shall be provided with Fire Department hose connections at accessible locations adjacent to usable stairs and the standpipe outlets shall be located adjacent to those usable stairs. The standpipe systems shall be

extended as construction progresses to within one floor of the highest point of construction having secured decking or flooring.

In each floor there shall be provided a 2½ inch (63.5 mm) valve outlet for Fire Department use. Where construction height requires installation of a Class III standpipe, fire pumps and water main connections shall be provided to serve the standpipe.

**12.3. Temporary Standpipes.** Temporary Standpipes may be provided in place of permanent systems if they are designed to furnish a minimum of 500 gallons (1893 L) of water per minute at 50 pounds per square inch (345 kPa) pressure with a standpipe size of at least four inches (102 mm). All pumping equipment sufficient to provide this pressure and volume shall be available at all times when a Class III standpipe system is required.

**12.4. Detailed Requirements.** Standpipe Systems for buildings under construction shall be installed as required for permanent Standpipe Systems.

Sec. 33. Section 94.2030.0 of the Los Angeles Municipal Code is hereby amended to read as follows:

#### **SEC. 94.2030.0. FIRE PUMP AND DRIVERS.**

**FIRE PUMPS AND DRIVERS.** Fire pumps, their drivers and associated piping and equipment shall conform to the requirements set forth in NFPA 20-2007 with the following exceptions and modifications:

**94.2030.1.** NFPA 20-2007 Sections 1.4 through 1.4.3 are not adopted.

**94.2030.2.** NFPA 20-2007 Sections 5.7.1 is added and modified to read as follows:

**5.7.1.** Fire pumps, equipment used with fire pumping systems, devices and attachments shall be listed. A copy of the manufacturer's certified pump test characteristic curve shall be available for comparison of results of field acceptance tests. The fire pump as installed shall equal the performance as indicated on the manufacturer's certified shop test characteristic curve within the accuracy limits of the test equipment.

**94.2030.3.** NFPA 20-2007 Sections 5.11.1.4 is added and modified to read as follows:

**5.11.1.4.** The relief valve shall discharge to an approved location.

**94.2030.4.** NFPA 20-2007 Sections 5.14.2.1 is added and modified to read as follows:

**5.14.2.1. General.** Installation of above-ground suction piping shall conform to the requirements for fire sprinkler piping.

94.2030.5. NFPA 20-2007 Sections 5.14.4.1 is added and modified to read as follows:

**5.14.4.1. Pump Bypass.** A full-way pump bypass with check valve shall be connected downstream of the fire pump shutoff valve when available pressure will supply useful protection with the pump off. There shall be two control valves to isolate check valves in each bypass.

94.2030.6. NFPA 20-2007 Sections 5.14.11 is added and modified to read as follows:

**5.14.11. Fire Department Connections.** Fire Department connections shall not be connected on the suction side of the fire pump.

94.2030.7. NFPA 20-2007 Section 5.17 is added and modified to read as follows:

**5.17. Protection of Piping Against Damage Due to Movement.** Clearance for the piping shall conform to the requirements of Section 9.3.4 of NFPA 13- 2010.

94.2030.8. NFPA 20-2007 Sections 5.19.2 through 5.19.2.3.3 are not adopted.

94.2030.9. NFPA 20-2007 Section 5.19.3.1.4 is added and modified to read as follows:

**5.19.3.1.4** The discharge from the test header shall terminate to the fire water storage tank where available.

94.2030.10. NFPA 20-2007 Sections 5.19.3.5 is added and modified to read as follows:

**5.19.3.5 Label.** Test headers hose valves shall be labeled "TEST CONNECTIONS."

**EXCEPTION:** Temporary Fire Pumps and Outlets.

94.2030.11. NFPA 20-2007 Sections 5.24.8 is added and modified to read as follows:

**5.24.8. Pressure Maintenance (Jockey or Makeup) Pumps.** A pressure maintenance pump shall be installed with each fire pump system.

**EXCEPTION:** Fire pump serving class II standpipes, temporary standpipes and fire pumps serving fire systems in one and two-dwelling family dwellings.

94.2030.12. NFPA 20-2007 Section 5.30.1 (1) is not adopted.

94.2030.13. Chapter 9 of NFPA 20-2007 is not adopted.

94.2030.14. NFPA 20-2007 Sections 10.1 through 10.4.8 are not adopted.

**94.2030.15.** NFPA 20-2007 Sections 10.6 through 10.10.11 are not adopted.

**94.2030.16.** NFPA 20-2007 Section 11.4 is added and modified to read as follows:

**11.4. Fuel Supply and Arrangement.** Fuel supply and arrangement shall be installed as required by the Los Angeles Fire Code.

**94.2030.17.** NFPA 20-2007 Sections 11.4.1 through 11.4.8 are not adopted.

Sec. 34. Section 94.2040.0 of the Los Angeles Municipal Code is amended to read as follows:

**SEC. 94.2040.0. UNDERGROUND FIRE PROTECTION PIPING.**

This section regulates underground fire protection piping between the City main or other sources of supply and fire hydrants, fire sprinkler risers, and monitor nozzles. Above ground standpipe piping and water spray systems shall conform to applicable code requirements for fire sprinkler piping and to the requirements set forth in NFPA 24-2010 with following exceptions, modifications and additions:

**94.2040.1.** NFPA 24-2010 Chapter 2 is not adopted.

**94.2040.2.** NFPA 24-2010 Section 4.2.1 is added and modified to read as follows:

**4.2.1.** Installation work shall be done by fully experienced and responsible contractors. Contractors shall be appropriately licensed in the State of California to install private fire service mains and their appurtenances.

**94.2040.3.** NFPA 24-2010 Section 4.2.2 is added and modified to read as follows:

**4.2.2.** Installation or modification of private fire service mains shall not begin until plans are approved and appropriate permits secured from the authority having jurisdiction.

**94.2040.4.** NFPA 24-2010 Section 4.2.2.1 is added and modified to read as follows:

**4.2.2.1.** As approved by the authority having jurisdiction, emergency repair of existing system may start immediately, with plans being submitted to the authority having jurisdiction within 96 hours from the start of the repair work.

**94.2040.5.** NFPA 24-2010 Section 5.6. is added and modified to read as follows:

**5.6. Pumps.** A single automatically controlled fire pump installed in accordance with Section 94.2030 of this Chapter shall be an acceptable water supply source.



**94.2040.6.** NFPA 24-2010 Section 5.7 is added and modified to read as follows:

**5.7.** Tanks shall be installed in accordance with "Section 94.2050 of this division."

**94.2040.7.** NFPA 24-2010 Section 5.9.1 is added and modified to read as follows:

**5.9.1. General.** Fire Department connections shall comply with the applicable requirements for fire sprinkler systems.

**94.2040.8.** NFPA 24-2010 Section 5.9.1.2. is added and modified to read as follows:

**5.9.1.2.** Fire Department connections shall be properly supported and protected from mechanical damage.

**94.2040.9.** NFPA 24-2010 Section 5.9.1.5 is added and modified to read as follows:

**5.9.1.5. Control Valve.** A control valve shall be installed between the City check valve and the point of connection to the fire department connection to the underground piping.

**94.2040.10.** NFPA 24-2010 Section 5.9.5.1 is added and modified to read as follows:

**5.9.5.1.** Fire Department connections shall be on the street side of buildings and as approved by the authority having jurisdiction.

**94.2040.11.** NFPA 24-2010 Section 6.1.5 is added and modified to read as follows:

**6.1.5.** A non indicating valve such as an underground gate valve with approved roadway, complete with T wrench, and accepted by the authority having jurisdiction shall be permitted to be used as sectional isolation valves in private service mains that do not supply fire sprinklers.

**94.2040.12.** NFPA 24-2010 Section 6.2.11 (5) is not adopted.

**94.2040.13.** NFPA 24-2010 Section 6.3.3.1 is not adopted.

**94.2040.14.** NFPA 24-2010 Section 6.4.1 is modified by changing the reference "NFPA 13" to "Section 94.2050 of this Division."

**94.2040.15.** NFPA 24-2010 Section 6.6.2.is added and modified to read as follows:

**6.6.2.** A sectional valve shall be provided at the following locations:

1. On each bank where a main crosses a body of water.

2. Outside the building foundation(s) where a main or a section of a main runs under a building.

**94.2040.16.** NFPA 24-2010 Section 6.6.2.1 through 6.6.2.4 are added and modified to read as follows:

**6.6.2.1.** Sectional control valves are not required when the fire service main system serves less than six fire appurtenances.

**6.6.2.2.** Sectional control valves shall be indicating valves in accordance with Section 94.2010 of this chapter.

**6.6.2.3.** Sectional control valves on looped systems shall be located so that no more than five fire appurtenances are affected by shut-down of any single portion of the fire service main. Each fire hydrant, fire sprinkler system riser, and standpipe riser shall be considered a separate fire appurtenance. In-rack sprinkler systems shall not be considered as a separate appurtenance.

**6.6.2.4.** The number of fire appurtenances between sectional control valves is allowed to be modified by the authority having jurisdiction.

**94.2040.17.** NFPA 24-2010 Section 6.6.2.5 is added and modified to read as follows:

**6.6.2.5.** Looped underground systems shall be provided with sectional valves regardless of the number of appurtenances.

**94.2040.18.** NFPA 24-2010 Section 7.1.1.1 is added and modified to read as follows:

**7.1.1.1. Hydrant Valves.** Each fire hydrant shall be isolated by a listed key-type gate valve located at least four feet and not more than ten feet from the fire hydrant. The valve shall not be located in a parking space. No fire sprinkler riser valve shall control any fire hydrant.

**94.2040.19.** NFPA 24-2010 Section 7.1.5 is added and modified to read as follows:

**7.1.5. Water Supplies.** Water supplies for fire hydrant, monitoring nozzle and water spray systems shall be approved by the Fire Department.

**94.2040.20.** NFPA 24-2010 Section 10.6.5 is added and modified to read as follows:

**10.6.5.** Pipe joints shall not be located under foundation footings. The pipe under the building or building foundation shall not contain mechanical joints.

## **EXCEPTIONS:**

I. Where allowed in accordance with 10.6.2.

II. Alternate designs may be utilized where designed by a registered professional engineer and approved by the enforcing agency.

**94.2040.21.** NFPA 24-2010 Section 10.9.1 is added and modified to read as follows:

**10.9.1.** Backfill shall be well tamped in layers or puddled under and around pipes to prevent settlement or lateral movement. Backfill shall consist of clean fill sand or pea gravel to a minimum of 6" below and to a minimum of 12" above the pipe and shall contain no ashes cinders, refuse, organic matter, or other corrosive materials. Other backfill materials and methods are permitted where designed by a registered professional engineer and approved by the enforcing agency.

**94.2040.22.** NFPA 24-2010 Section 10.10.2.2.5 is added and modified to read as follows:

**10.10.2.2.5.** When permitted by the authority having jurisdiction and required for safety measures presented by the hazards of open trenches, the pipe and joints shall be permitted to be backfilled, provided the owner takes the responsibility for locating and correcting leakage.

**94.2040.23.** NFPA 24-2010 Section 12.1 is added and modified to read as follows:

**12.1.** General above ground pipe and fittings shall comply with the applicable Section 94.2010 of this chapter that address pipe, fittings, joining methods, hangers and installation.

**94.2040.24.** NFPA 24-2010 Section 12.2.5 is added and modified to read as follows:

**12.2.5.** To minimize or prevent breakage where subject to earthquakes, above ground pipe shall be protected in accordance with the seismic requirements of Section 94.2010 of this Division.

**94.2040.25.** NFPA 24-2010 Section 12.2.6 is added and modified to read as follows:

**12.2.6.** Mains that pass through walls, floors, and ceilings shall be provided with clearances in accordance with Section 94.2010 of this Division.

Sec. 35. Section 94.2060.1.3 of the Los Angeles Municipal Code is amended to read as follows:

**94.2060.1.3.** The tank shall be supplied from the City water main via a fill line. The fill line shall be sized to replenish the water in the tank at a rate equal to, or greater than, the required fire pump capacity. The fill line shall be a minimum of two inches in diameter and shall not exceed a maximum of four inlets into the tank. Each fill line inlet shall be provided with a manual shut off valve in the open position as well as an automatic valve. The fill line bypass shall be provided around all fill lines with a shut off valve that is normally closed. Means shall be provided to flow test the automatic fill lines.

An approved tank-fill line connected to the Fire Department connection shall also be installed. These fill lines shall have listed shutoff valves that are normally closed. The tank need not be on the roof.

For systems with multiple fill lines, the over flow system may be designed based on the failure of the largest fill valve serving the tank.

**Sec. 36. Urgency Clause.** The City Council finds and declares that this Ordinance is required for the immediate protection of the public peace, health and safety for the following reason: In order for the City of Los Angeles to facilitate a seamless transition with the State of California and its Plumbing Code and maintain predictability and streamlined case processing for the benefit of economic development during distressed times, it is necessary to immediately adopt the foregoing exceptions, modifications and additions to the California Plumbing Code. Additionally, the California Plumbing Code becomes effective on January 1, 2011 and the amendments to that code as reflected herein must be adopted by the City Council and become effective as soon as possible. The Council, therefore, with the Mayor's concurrence, adopts this ordinance to become effective upon publication pursuant to Los Angeles City Charter Section 253.

Sec. 37. The City Clerk shall certify to the passage of this ordinance and have it published in accordance with Council policy, either in a daily newspaper circulated in the City of Los Angeles or by posting for ten days in three public places in the City of Los Angeles: one copy on the bulletin board located at the Main Street entrance to the Los Angeles City Hall; one copy on the bulletin board located at the Main Street entrance to the Los Angeles City Hall East; and one copy on the bulletin board located at the Temple Street entrance to the Los Angeles County Hall of Records.

I hereby certify that this ordinance was passed by the Council of the City of Los Angeles, **by a vote of not less than three-fourths** of all of its members, at its meeting of \_\_\_\_\_.

JUNE LAGMAY, City Clerk


By \_\_\_\_\_  
Deputy

Approved \_\_\_\_\_

\_\_\_\_\_  
Mayor

Approved as to Form and Legality

CARMEN A. TRUTANICH, City Attorney

By   
KIM RODGERS WESTHOFF  
Deputy City Attorney

Date 5/18/11

File No. \_\_\_\_\_